

REMARKS

Applicants respectfully request further examination and reconsideration in view of the above amendments and arguments set forth fully below. Claims 1-88 were previously pending in the instant application. Applicants acknowledges that Claims 13-88 have been cancelled.

5 Within the Office Action, Claims 1-12 have been rejected. By way of the above amendments Claim 1 has been amended and the new Claim 89 has been added. Accordingly, Claims 1-12 and 89 are now pending in this application.

Rejections Under 35 U.S.C. § 102(b)

10 Within the Office Action, Claims 1-7, 11 and 12 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,662,040 to Mori et al. (hereafter "Mori et al."). It is stated within the Office Action that Mori et al. teach every feature of the claimed invention. Regarding Claim 11, it is stated within the Office Action that while Mori et al. does not specifically recite the membrane with a thickness of 1.0 microns or less, that at least a portion of
15 the membrane taught by Mori et al. must be less than 1.0 microns, presumably because of the outlet regions have no membrane material. Note that Claim 11 has been amended to recite that *the stencil features* of the membrane have thicknesses of 1.0 microns or less.

Mori et al. appear to teach a printing apparatus with porous backing layers and a stencil that is formed from a thermoplastic. The printing apparatus is configured for printing an ink onto
20 a paper substrate. In contrast to the teachings Mori et al., the present invention is directed to a micro-stencil for precession printing of small dimension features in micro-circuitry. The micro-stencil of the present invention not only needs to print small dimension features, but it also needs to be configured for a high degree of registration or fidelity with a print medium, such that micro-patterned layers can be printed sequentially on the print medium to build an electronic device.

25 Accordingly, Claim 1 has been amended to recite means to align the membrane with a medium between multiple prints. Applicants content that nowhere in the prior art is there taught a micro-stencil structure configured for printing micro-circuitry, or a micro-stencil structure configured for printing micro-circuitry that includes means for alignment to ensure a high degree of fidelity or registration with a print medium between multiple prints. For at least these reasons the
30 independent Claim 1 is allowable over the teachings of Mori et al.

Claims 2-7, 11 and 12 are all dependent on the independent Claim 1. As described above, the independent Claim 1 is allowable over the teachings of Mori et al. Accordingly, Claims 2-7, 11 and 12 are also all allowable as being dependent on an allowable base claim.

Rejections Under 35 U.S.C. § 103(a)

Within the Office Action, Claim 8 has been rejected under 35 U.S.C. § 103(a) as being unpatentable Mori et al.; Claim 9 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Mori et al. in view of U.S. Patent No. 3,934,503 to Kinney (hereafter “Kinney”); and Claim 10 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Mori et al. in view of U.S. Patent No. 4,957,808 to Arai et al. (hereafter “Arai et al.”).

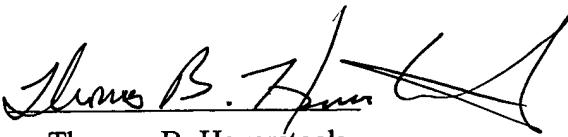
Claims 8-10 are all dependent on the independent Claim 1. As described above, the independent Claim 1 is allowable over the teachings of Mori et al. Accordingly, Claims 8-10 are also all allowable as being dependent on an allowable base claim.

The new Claim 89 is directed to a micro-stencil comprising a membrane formed from polydimethylsiloxane (PDMS) with a receptor surface and a print surface, the print surface being patterned with stencil features comprising lateral feature dimensions of less than 5.0 microns, a flow region through the membrane to allow a print fluid to flow from the receptor surface to the print surface for printing the stencil features on a medium, and means to align the membrane with the medium between multiple prints. For all the reasons described above, the new independent Claim 89 is allowable over the teachings of the prior art.

For the reasons given above, Applicants respectfully submit that Claims 1-12 and 89 are now in condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, the Examiner is encouraged to call the undersigned at (408) 530-9700 to discuss them so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: 3-24-04

By: 
Thomas B. Haverstock
Reg. No. 32,571

Attorney for Applicant(s)

CERTIFICATE OF MAILING (37 CFR § 1.8(a))

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